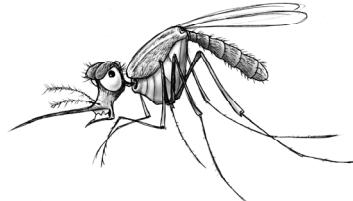




HAWAII STATE DEPARTMENT OF HEALTH

DISEASE OUTBREAK CONTROL DIVISION ENVIRONMENTAL HEALTH SERVICES DIVISION STATE LABORATORIES DIVISION

West Nile Virus Surveillance Report



I. Surveillance of West Nile Virus (WNV) (Mainland United States):

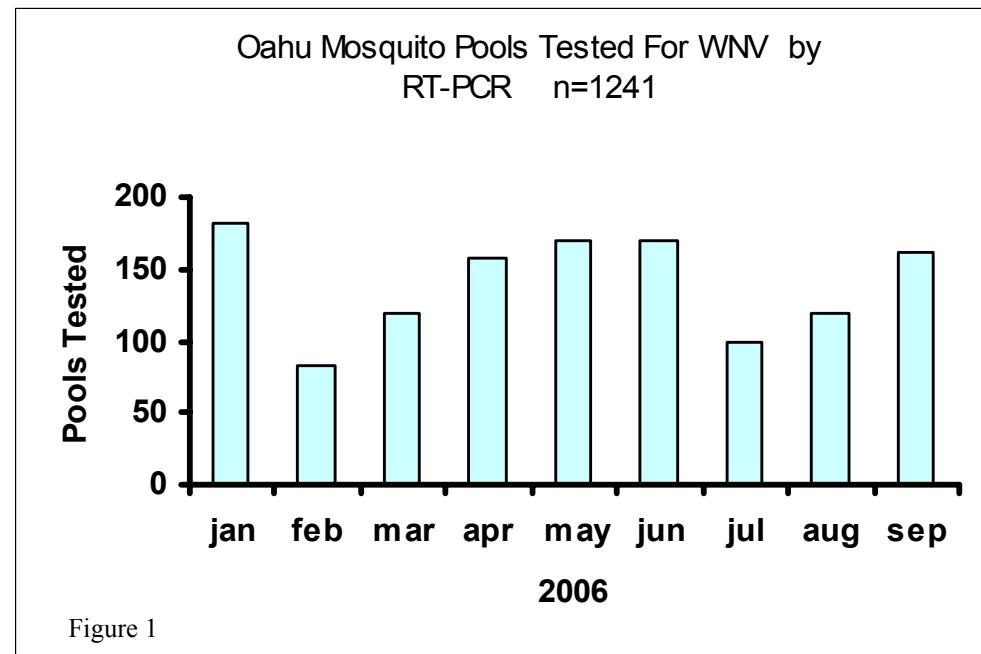
As of October 31, 2006, 48 states have reported human, avian, animal, or mosquito WNV infections to the Centers for Disease Control and Prevention (CDC) ArboNET (National Mosquito-borne Disease Surveillance Database). Hawaii and Alaska are the only 2 states that have reported no activity to date. During 2006, 3,572 human cases, including 117 fatalities,* have been reported in 41 states. For more detailed information, refer to the CDC website at <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>.

* National data presented in this report are obtained from the CDC's Weekly WNV Summary.

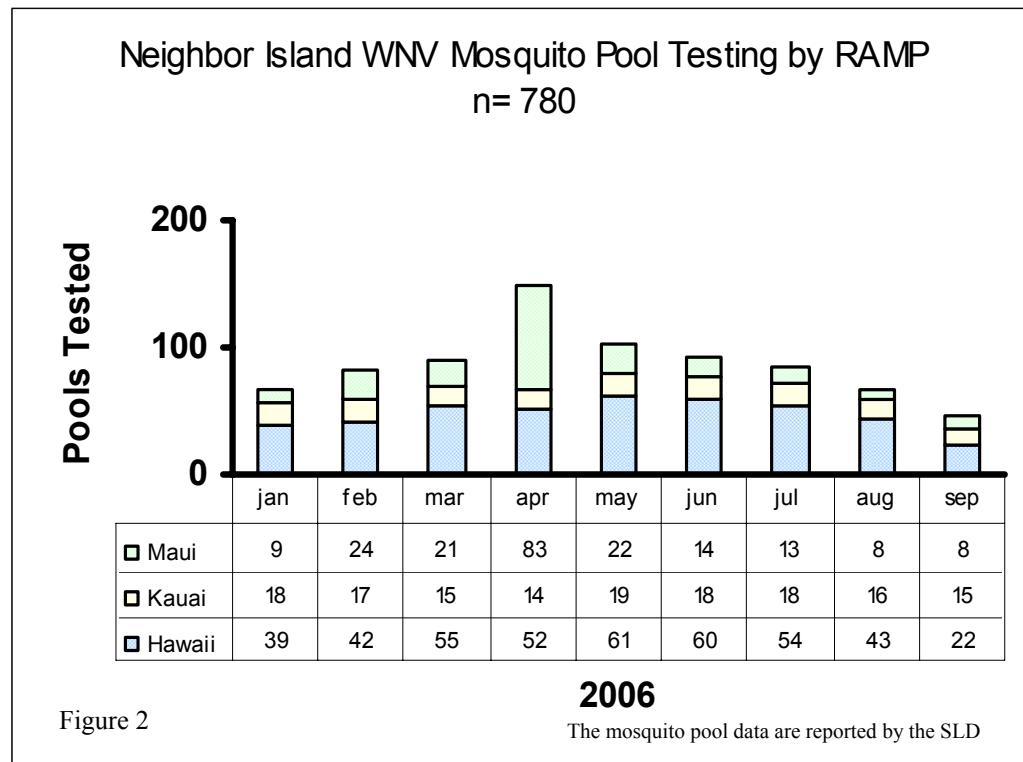
II. Hawaii's Mosquito Surveillance:

Surveillance for WNV in mosquitoes continues on all islands. To date in 2006, 1,241 mosquito pools (~ 50 mosquitoes per pool) in Oahu have been tested by reverse transcriptase polymerase chain reaction (RT-PCR) at the State Laboratories Division (SLD; Figure 1). **All these mosquito pools have tested negative for WNV.**

To date in 2006, 780 mosquito pools (12-50 mosquitoes per pool) in Maui, Kauai, and Hawaii have been tested by Rapid Analyte Measurement



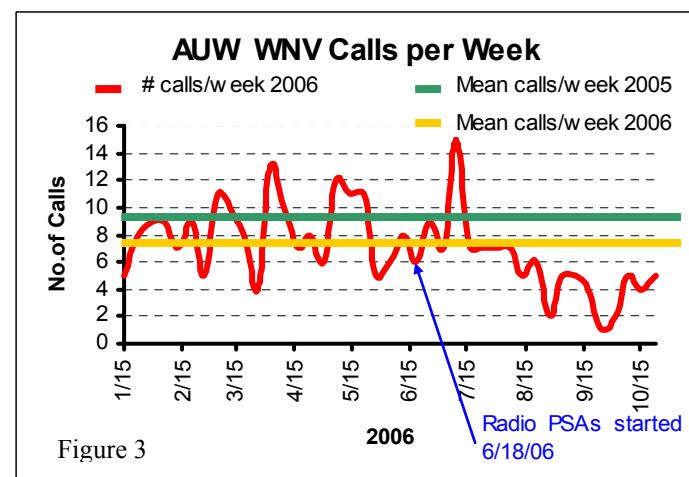
Platform (RAMP), and all have tested negative for WNV (Figure 2).



have had a blood meal (a blood meal is when mosquito has bitten a person or animal and fed upon their blood) and are ready to lay their eggs. These traps are located near ports of entry, harbors, and wetlands.

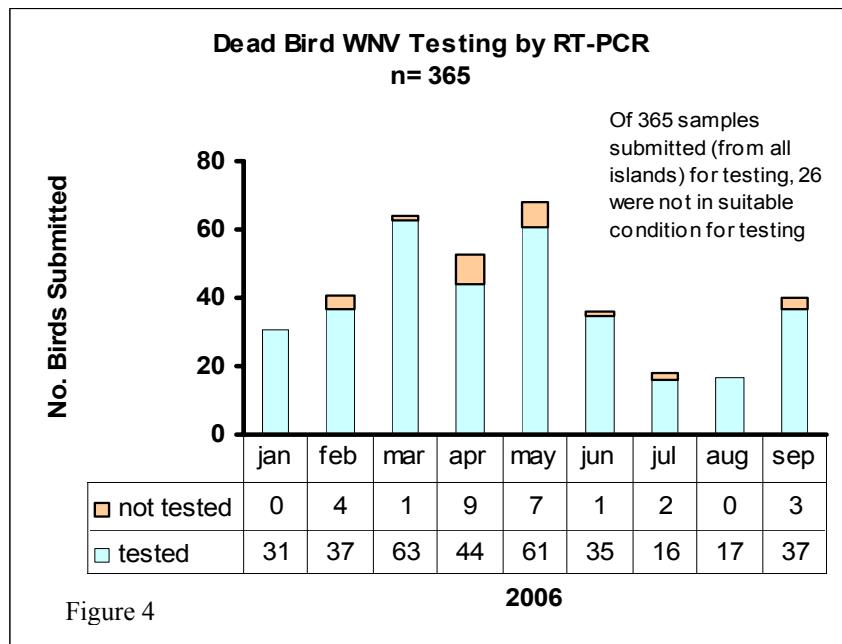
Mosquitoes are captured in special traps called gravid mosquito traps (Image 1). Gravid traps are designed to capture female mosquitoes that

III. Hawaii's Dead Bird Surveillance:



The public is encouraged to report dead birds via the Aloha United Way (AUW) 211 number. To date in 2006, AUW operators have fielded 286 calls from the public (Figure 3). This year there has been an average of 30 calls/month compared with 22 calls/month in 2005 over the same time period.

Dead Bird Testing:



WNV. All other species submitted are tested. However, the public is still encouraged to report all dead birds.

IV. Live Bird Surveillance

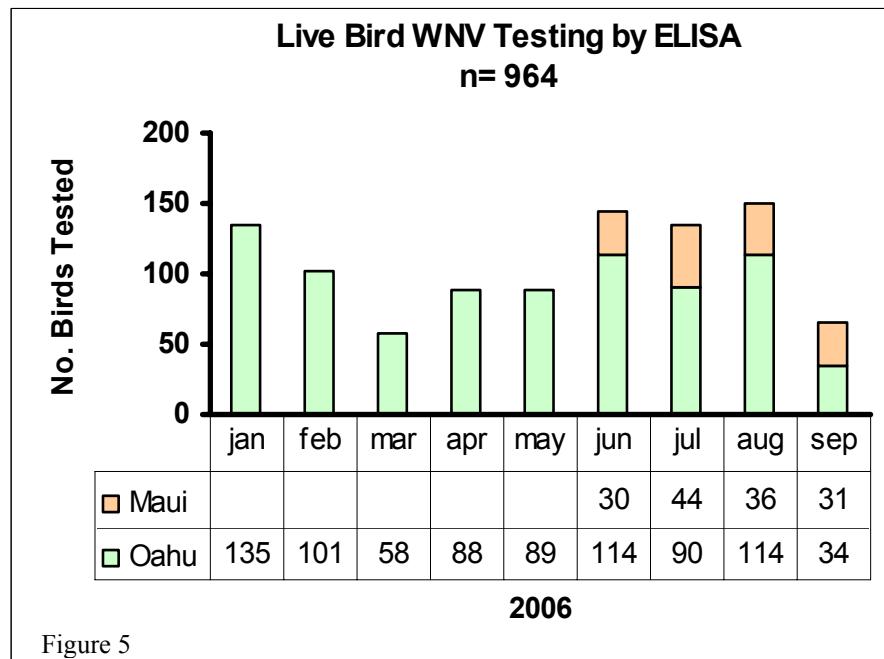
Live bird surveillance on Oahu is limited to the major ports of entry: Honolulu Airport, Dillingham Airfield, and Barber's Point Airfield. In June 2006, testing of live birds was initiated at Maui's Kahului airport.

Live bird surveillance is a collaboration between many state and federal agencies including: the U.S. Department of Transportation (has a contract with the U.S. Department of Agriculture, Wildlife Services Division to catch birds on all island's airports preventing birds hitting planes), U.S. Geological Survey (on Oahu – collection of blood samples from

To date in 2006, the average number of dead birds tested for WNV at SLD per month is 38 with a total of 365 birds tested in comparison to an average of 36/month and a total of 266 birds tested by this time in 2005 (Figure 4). All have been RT-PCR negative.

The predominant avian species tested in 2005 were [Doves and Avian Other](#) (includes chickens), in which WNV does not normally cause mortality.

Since July 2006, we have focused testing to only species that are most susceptible to death when infected by WNV. The Department of Health (DOH) does not routinely test doves, pigeons, mynahs, or chickens for



these birds which are tested for WNV at SLD), and Division of Land and Natural Resources (on Maui - draw and ship the blood samples from the birds to SLD for testing).

Approximately 30 birds per week from each of these two islands are captured, bled, and tested for WNV antibodies by epitope-blocking enzyme-linked immunosorbent assays (ELISA) test at SLD (Figure 5). **All tests have been negative for WNV.**

In contrast to dead bird testing, desirable species for live bird surveillance are those considered capable of surviving WNV infection.

V. Equine Surveillance

The Hawaii Department of Agriculture mailed letters to all the licensed veterinarians in Hawaii working with horses and requested surveillance for horses with signs of neurological disease. Serum (blood) samples are submitted by private veterinarians from horses with clinical signs of WNV. To date in 2006, all 2 samples have tested **negative**.

VI. Human Surveillance

The DOH requests that physicians and diagnostic laboratories report neurological cases with symptoms consistent with WNV. To date in 2006, all 10 samples submitted have been **negative** for WNV.

VII. Summary

The State of Hawaii is **currently WNV free**. The public can help tremendously by keeping areas around homes free of mosquito breeding sites. This can be accomplished by emptying standing water in old tires, bottles, and planter overflow trays; cleaning clogged rain gutters; and using mosquito eating fish in fish ponds and water gardens. For more information on ways you can control mosquitoes around your home visit the Vector Control web site at <http://www.hawaii.gov/health/environmental/water/vector/index.html>.

The public can also help by calling the Aloha United Way (AUW) 211 hotline to report any dead bird they might find. For more information on WNV and to report a dead bird, **call 211** or visit the HDOH website at www.hawaii.gov/health. The AUW 211 WNV hotline is operational from most land phones and many cell phones. It does not work from payphones. Alternate AUW WNV hotlines are 877-275-6569 (toll free), ASK-2000 (on Oahu), or 808-ASK-2000 (from neighbor islands).

Mosquito cartoon on first page by Michael Furuya.